APPROPRIATIONS REQUEST FORM
OREGON HOUSE DELEGATION
FISCAL YEAR 2010

DEADLINE FOR SUBMISSION: FEBRUARY 20, 2009

PLEASE NOTE: As required by the House Appropriations Committee, all requests will be made public on the requesting Member's website.

1. Project Title: Endophyte Toxicosis Research

2. Organization Name and address: College of Veterinary Medicine, Oregon State University
105 Magruder Hall
Corvallis, OR 97331-5704

3. Primary Contact name, phone number, mobile phone number, fax number and email:

4. Project Location Address (if different from Organization): same

5. Please describe the requesting organization's main activities, and whether it is a public, private non-profit, or private for-profit entity: Academic / Research

6. Briefly describe the activity or project for which funding is requested (please keep to 500 words or less.)

The goal of endophyte toxicosis research is to alleviate the toxic effects of fungal endophyte-infected grasses fed to cattle and other livestock while maintaining and improving the grass's ability to persist on poor soils during drought. Some of the alkaloids in endophyte fungus promote the hardiness of infected grasses, however, others have harmful effects on grazing animals. Endophyte toxicosis costs $1 billion in losses to the U.S. livestock producers annually. Exports of U.S. grass products have also been greatly restricted due to the presence of high concentrations of endophyte toxins in U.S. products.

This project, conducted jointly by the University of Arkansas, the University of Missouri, and Oregon State University, seeks to solve the toxic endophyte dilemma by using a unique two-pronged approach. The first prong addresses the plant problem. Plant scientists are developing new varieties of pasture grass with new endophyte fungi that will be nontoxic to livestock and still maintain plant hardiness. Researchers are also developing new ways to detoxify endophyte-infected grasses by reducing the level of toxins present. These new methods involve pasture management and the development of new grass varieties. The second prong addresses how animals are affected by the toxins. Animal Scientists are examining methods to alleviate endophyte toxicosis caused by two of the common forage grasses associated with endophyte infection – tall fescue and perennial ryegrass.

An interdisciplinary and interregional approach is necessary to resolve this complex problem involving animal toxicology, plant drought tolerance, varying climatic and soil conditions, economics, and the human element in farm-scale management. Safe feed is of primary importance

and this collaborative research on endophyte will ensure the ability to utilize a major agricultural commodity in the United States as well as for export by eliminating toxicity to livestock.

7. Has this project received federal appropriations funding in past fiscal years? Yes

7a. If yes, please provide fiscal year, Department, Account, and funding amount of any previous funding.

Funding has been from USDA/ARS in a Cooperative Agreement for research at the University of Missouri, University of Arkansas and Oregon State University

Funds to OSU:

OSU – 2000 USDA/ARS - $107,317
OSU – 2001 USDA/ARS - $190,264
OSU – 2002 USDA/ARS - $190,264
OSU – 2003 USDA/ARS - $213,684
OSU – 2004 USDA/ARS - $299,457
OSU – 2005 USDA/ARS - $295,486
OSU – 2006 USDA/ARS - $289,577
OSU – 2007 USDA/ARS - $217,047
OSU – 2008 USDA/ARS - $267,550
OSU – 2009 USDA/ARS - *anticipated $287,000*
OSU Total - $1,880,382

8. Federal agency and account from which funds are requested (Please be specific –e.g. Department of Housing and Urban Development, Economic Development Initiatives account):

USDA/ARS

9. What is the purpose of the project? Why is it a valuable use of taxpayer funds? How will the project support efforts to improve the economy and create jobs in Oregon?

Endophyte toxicosis causes an annual $1 billion loss to U.S. agriculture in reduced animal productivity. In 2002, 605 cattle out of a herd of 1,300 were lost in Eastern Oregon; in 2007, 45 cattle out of a herd of 330 died due to endophyte toxicosis in Western Oregon. These are just two examples of recent cases of endophyte toxicosis. Each year there are cattle exhibiting clinical signs of endophyte toxicosis that are admitted to the Oregon State University Veterinary Hospital by producers or referred by veterinarians. Reducing toxicosis in cattle, sheep, and horses will improve rural economies from Oregon to Georgia, especially in the Midwest and Southeast, by boosting animal health. Beef cattle herds tend to be small and numerous, therefore a realistic 20% increase in marketable production resulting from adoption of our research findings would constitute a substantial increase in rural household income across the nation. International competitiveness of beef production would increase as our products allow intensification of livestock management at low cost.

The majority of the U.S. supply of cool season grass seed is produced in the northwest. This seed provides the turfgrass used in lawns and soil conservation throughout the country. Finding a means to ameliorate endophyte toxicosis would enhance sales. International marketing (primarily export to Japan and Korea) of the value-added straw by-product from seed production depends on providing safe feed for export.

This research and development effort will result in the training of numerous graduate students and postdoctoral scientists and add to the technically-trained workforces of Oregon and the nation.

10. Have you requested funding for this project from other Members of Congress? If so, who? Oregon Representative - Blumenauer

11. Funding Details:

a. Total project cost (all funding sources and all years):
~$10.5 million for entire project with ~ $3.4 million to OSU

b. Amount being requested for this project in Fiscal Year 2010: $1.4 million (maintain the ~$300,000 to each cooperating university [University of Arkansas, University of Missouri, and Oregon State University] with an increase to USDA/ARS

c. What other funding sources (local, regional, state) are contributing to this project or activity? (Please provide specific dollar amount or percentage.) None

d. Do you expect to request federal funding in future years for this project? Yes

e. Breakdown/budget of the amount you are requesting for this project in FY 2010. (e.g. salary $40,000; computer $3,000): FY 2010 - $287,000

Salaries - $188,500
- ½ Current Post Doc #1 - $37,600
- ½ Current Post doc #2 – 32,400
- Current Research Associate #1 - $84,000
- ½ Current Research Associate #2 – 34,500

Materials & Supplies - $47,200
Equipment - $34,300
- $18,000 - RT-PCT instrument
- $3,100 - 96 well roter for centrifuge
- $13,200 - Ultra low freezer

Travel (to cover foreign and domestic travel to professional meetings for principal investigator, 2 post docs, and 4 graduate students) - $16,000
Publications (posters) - $1,000
TOTAL - $287,000

f. Please list public or private organizations that have supported/endorsed this project:

Oregon Seed Council, Roger Beyer (Executive Director), 1193 Royvonne South, Suite 11, Salem, OR 97302-1932, TEL: (503) 585-1157

Oregon Ag Fiber Association, Steve Van Mouwerik (Past President), General Manager Oregon Div., Anderson Hay and Grain Co., Inc., 23261 Hubbard Cut-off Rd., Aurora, OR 97002, TEL: (503) 678-2390

Oregon Governor's Board of Agriculture, Steve Van Mouwerik (Past President), General Manager Oregon Div., Anderson Hay and Grain Co., Inc., 23261 Hubbard Cut-off Rd., Aurora, OR 97002, TEL: (503) 678-2390

National Hay Association, Mark Anderson (Past President), Anderson Hay and Grain, Inc., P.O. Box 99, 910 Anderson Road, Ellensburg, WA 98926, TEL: (509) 925-9818 and Steve Van Mouwerik (Chairman of Export Processor Committee), General Manager Oregon Div.,

Anderson Hay and Grain Co., Inc., 23261 Hubbard Cut-off Rd., Aurora, OR 97002, TEL: (503) 678-2390

g. Is this project scalable? (i.e. if partial funding is awarded, will the organization be able to use the funds in FY 2010?): Yes